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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BARBEE, MANUEL L	
ART UNIT	PAPER NUMBER
2857	
MAIL DATE	DELIVERY MODE
12/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/646,719	NEUMAN ET AL.	
	Examiner	Art Unit	
	MANUEL L. BARBEE	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 August 2008 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,328,577 to Abbott et al. (Abbott) in view of the article in WESCON/94. 'Idea/Microelectronics'. Conference by Sebaa et al. (Sebaa) and US Patent No. 5,787,463 to Gajjar (Gajjar).

As per claim 1:

With regard to a switching device with multiple input and output ports and only one testing output data path, Abbott teaches a multiplexer demultiplexer system with a monitor connectable to inputs or outputs for monitoring the data path (col. 1, lines 5-41; col. 2, line 54 - col. 3, line 29; Fig. 1). With regard to each input

port being connectable to a single one of the output ports, Abbott teaches transmitting a signal from an input port and receiving the signal at a corresponding output port (Fig. 1, col. 3, lines 7-29). With regard to the one testing output data path dynamically configurable to couple to only one primary data-path and a controller connectable to the switching device via the one testing output data path to connect to a selected data path and permit analysis of a data path, Abbott teaches a monitor and controlling the monitor to monitor various signal paths for faults (col. 2, lines 54-63; col. 14, line 60 - col. 15, line 68; Figure 1, monitor 101). Abbott teaches a monitor that chooses one data entry point and choosing one channel of data from four channels of data (col. 15, lines 24-35; col. 16, lines 1-13).

Abbott does not teach that the switching device is coupled to a video source. Sebaa teaches a video controller and testing a video card having a data path upon which the video data passes (page 542, Section 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the muldem monitor system, as taught by Abbott, to include a video source, as taught by Sebaa, because then the video data path would have been tested without disrupting operation (Sebaa et al., Abstract; Abbott et al. col. 1, lines 1-23).

Abbott does not teach testing cyclic redundancy checksum output data wherein a CRC module is configured to configured to receive video testing output data directly from one testing output data path to perform uninterrupted CRC testing of

the video testing output or that the permitted analysis is based only on data received at the testing output port through the only one data path. Sebaa teaches CRC analysis using synchronization to enable the proper start and stop of the window of operation of the signature analysis register in a test answer evaluator, which is based only on data received at the output (pages 542-543, Section 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the muldem monitor, as taught by Abbott, to include CRC analysis, as taught by Sebaa, because then the video data path would have been checked for errors (Sebaa, page 542, Abstract, Section 1). Abbott does not teach that the one testing output data-path is dedicated to CRC output data. Gajjar teaches hardware dedicated to CRC testing (col. 4, lines 26-57; col. 5, lines 25-52; Fig. 3, CRC 118, Fig. 4, CRC 428). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the muldem monitor, as taught by Abbott, to include dedicated CRC hardware, because then CRC testing would not have been delayed by any other functions.

As per claims 4 and 5:

Abbott does not teach CRC analysis or a CRC module. Sebaa teaches CRC analysis in a test answer evaluator (pages 542-543, Section 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the muldem monitor, as taught by Abbott, to include CRC analysis, as

taught by Sebaa, because then the video data path would have been checked for errors (Sebaa, page 542, Abstract, Section 1).

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott in view of Sebaa and Gajjar. as applied to claim 1 above, and further in view of US Patent Application Publication 2001/0013104 to Mann et al. (Mann).

Abbott, Sebaa and Gajjar teach all the limitations of claim 1 upon which claim 2 depends. Abbott, Sebaa and Gajjar do not teach a video cross-bar device, as shown in claim 2. Mann teaches a cross-bar system for video (par. 85). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the muldem system combination, as taught by Abbott and Sebaa, to include a cross-bar system, as taught by Mann, because then a flexible method for routing video feeds would have been used (Mann, pars. 84-86).

4. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 3,928,730 Aagaard et al. (Aagaard) in view of Abbott, Sebaa and Gajjar.

As per claim 6:

With regard to two switching devices both with multiple input and output ports and with the output ports of the first switching device connected to the input ports of the second switching device, Aagaard teach a matrix module switching network with three stages of switching devices (Fig. 1). With regard to each first input port being connectable to a single one of the first output ports, Aagaard

teaches connecting the inputs of a first switch to output connected to inputs of a second set of switches (Fig. 1, matrix stages A and B; Fig. 3, lines 28-47). Aagaard does not teach one separate testing output data path dynamically configurable to monitor one input or output port or data path, as shown in claim 6. Abbott teaches a monitor connectable to inputs or outputs for monitoring the data path (col. 1, lines 5-41; col. 2, line 54 - col. 3, line 29; Fig. 1, monitor 101). Abbott teaches a monitor that chooses one data entry point and choosing one channel of data from four channels of data (col. 15, lines 24-35; col. 16, lines 1-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the matrix switching network, as taught by Aagaard, to include a monitoring apparatus, as taught by Abbott, because then the system would have been automatically adjusted for failures and errors would have been detected (Abbott, col. 1, lines 6-37).

Aagaard does not teach a controller connectable to the second switching device via the one testing output data path to connect to a selected data path and permit analysis of a data path, as shown in claim 6. Abbott teaches a monitor and controlling the monitor to monitor various signal paths for faults (col. 2, lines 54-63; col. 14, line 60 - col. 15, line 68; Figure 1, monitor 101). Abbott teaches a monitor that chooses one data entry point and choosing one channel of data from four channels of data (col. 15, lines 24-35; col. 16, lines 1-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the matrix switching network, as taught by Aagaard, to include a

monitoring apparatus with the control, as taught by Abbott, because then the system would have been automatically adjusted for failures and errors would have been detected (Abbott, col. 1, lines 6-37).

Aagaard does not teach that the permitted analysis is based only on data received at the testing output port through the only one data path or CRC output data wherein the CRC module is configured to receive testing output data directly from the one testing output data-path and to perform uninterrupted CRC testing of the video testing output data. Sebaa teaches CRC analysis using synchronization to enable the proper start and stop of the window of operation of the signature analysis register in a test answer evaluator, which is based only on data received at the output (pages 542-543, Section 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the matrix switching network, as taught by Aagaard, to include CRC analysis, as taught by Sebaa, because then the video data path would have been checked for errors (Sebaa, page 542, Abstract, Section 1).

Aagaard does not teach that the one testing output data-path is dedicated to CRC output data. Gajjar teaches hardware dedicated to CRC testing (col. 4, lines 26-57; col. 5, lines 25-52; Fig. 3, CRC 118, Fig. 4, CRC 428). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the matrix switching network, as taught by Aagaard, to include dedicated CRC hardware, because then CRC testing would not have been delayed by any other functions.

As per claim 7:

Aagaard does not teach a data collection device, as shown in claim 7. Abbott teaches a monitor connectable to inputs or outputs for monitoring the data path (col., lines 5-41; col. 2, line 54 - col. 3, line 29; Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the matrix switching network, as taught by Aagaard, to include a monitoring apparatus, as taught by Abbott, because then the system would have been automatically adjusted for failures and errors would have been detected (Abbott, col. 1, lines 6-37).

As per claims 8 and 9:

Aagaard does not teach a CRC module and CRC checking, as shown in claims 8 and 9. Sebaa teaches CRC analysis in a test answer evaluator (pages 542-543, Section 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the matrix network, as taught by Aagaard, to include CRC analysis, as taught by Sebaa, because then video data paths would have been checked for errors (Sebaa, page 542, Abstract, Section 1).

Allowable Subject Matter

5. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, the hardware corresponds to a data path since data would have travel from a source and along some path in the hardware for CRC testing.

Response to Arguments

6. Applicant's arguments filed 10 October 2007 have been fully considered but they are not persuasive.

Applicant states that Abbott, Sebaa, Mann Aagaard and Gajjar fail to teach or suggest "wherein a CRC module is configured to receive testing output data directly from the one testing output data-path and to perform uninterrupted CRC testing of the video testing output path." However, Sebaa teaches CRC analysis using synchronization to enable the proper start and stop of the window of operation of the signature analysis register in a test answer evaluator, which is based only on data received at the output (pages 542-543, Section 2). Further, Gajjar teaches hardware dedicated to CRC testing (col. 4, lines 26-57; col. 5, lines 25-52; Fig. 3, CRC 118, Fig. 4, CRC 428). Both Sebaa and Gajjar teach CRC testing without any interruption.

Applicant states that other operations of Gajjar's RAID processor would interrupt the CRC video output data testing so as to make the testing ineffective. However, Gajjar teaches using dedicated hardware to calculate the CRC (col. 5, lines 32-34).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MANUEL L. BARBEE whose telephone number is (571)272-2212. The examiner can normally be reached on Monday-Friday from 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on 571-272-7925. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Manuel L. Barbee/
Primary Examiner, Art Unit 2857

mlb
November 26, 2008